Remarks

Claims 1-2, 4-23, 26-28, 30-34, 50-55, 57-63, 65, and 69-78 are pending.

Claims 3, 24-25, 29, 35-49, 56, 64, and 66-68 have been canceled.

Claims 1, 9, 11-13, 18, 22, 28, 32, 50, 58, 60-62, and 69-78 have been amended. The claims have been amended to clarify that one bond pad is connected to function circuitry and adapted to receive and supply a test mode signal and an operational mode signal to the function circuitry, and the other bond pad is adapted to receive and supply only an operational mode signal. The amendments to the claims is supported in the specification, for example, at page 4, lines 5-9:

> ...An embodiment of a bond pad structure of an integrated circuit die for use in testing and operating circuitry, comprises a first bond pad which is a test mode bond pad that receives and responds to a test mode signal and, after the test sequence is complete and the first and a second bond pad of the bond pad structure are interconnected with a conductive material, the first and second bond pads function as a single unit to receive and respond to any signal.

Test mode bond pads and operational mode bond pads are well known in the art, as discussed in Applicant's specification at pages 8-9, bridging paragraph (describing prior art test enable bond pads) (emphasis added):

> ...For example, methods of testing an integrated circuit using a test enable bond pad are generally described, for example, in **U.S. Patent Nos. 6,240,535** and 5,796,746 (Farnworth et al., to Micron Technology, Inc.). The integrated circuit (IC) module (not shown) generally includes a terminal receiving a test mode signal, and an IC die having a function circuit and a bond pad. ...*The test mode bond pad is connected to the function circuit* and enables a test mode in an I.C. die. ...Briefly, *a supply voltage is applied to the test mode bond pad, and the function circuit responds to the test mode signal by initiating a test mode in the die to test the circuitry thereon*...

Further, with regard to **USP 6,240,535**, the patentees describe IC dies having bond pads that are adapted to receive a test mode initiate signal, and other dies adapted to receive other than test mode initiate signals. See for example, at col. 2, lines 37-44 and 63 to col. 3, line 14 (emphasis added):

> In another embodiment of this invention, an IC module includes one or more terminals receiving a test mode initiate signal and an operational mode signal. One or more IC dice in the IC module each have one or more function circuits *and a plurality of bond pads, and a first subset of the bond pads is coupled to the function circuits while a second subset of the bond pads is adapted to receive signals other than the test mode initiate signal in the test mode*...
>
> In a further embodiment of this invention, a method for initiating a test mode and an operational mode in dice in an IC module includes: receiving a test mode initiate signal at a terminal of the IC module; *conducting the test mode initiate signal only to those bond pads on dice in the IC module adapted to receive the signal and from those bond pads to function circuits in the dice to initiate a test mode therein*; discontinuing conduction of the test mode

initiate signal to the function circuits; and conducting an operational mode initiate signal to each function circuit to initiate the operational mode therein.

In a still further embodiment, a method for testing one or more dice in an IC module includes: providing a test mode initiate signal to an externally accessible terminal of the IC module; *conducting the test mode initiate signal exclusively to bond pads on the dice adapted to receive the signal to initiate a test mode in the dice*; testing each die; receiving response signals from the dice; and evaluating the response signals to identify any failing elements in the dice.

The amendments are intended to merely clarify language used in the claims and the subject matter claimed, and the scope of the claims is intended to be the same after the amendment as it was before the amendment.

Rejections under 35 U.S.C. § 102(b) (Preslar)

The Examiner maintains the rejection of Claims 28, 30-34, 74, and 76 as anticipated by USP 5,900,643 (Preslar). Insofar as this rejection is maintained with respect to the claims as amended, this rejection is respectfully traversed.

The Examiner maintains that the limitation "wherein the first bond pad is functional only in an operation mode" is "*intended use or functional language* which does not differentiate the claimed structure over Preslar."

Claims 28, 32, 74 and 76 have been amended to clarify that one bond pad is connected to function circuitry and adapted to receive and supply a test mode signal and an operational mode signal to the function circuitry, and the other bond pad is adapted to receive and supply only an operational mode signal upon connection of the two bond pads together.

Preslar teaches a bond pad structure in which *both* bond pads are structured for testing of components in a test mode. See Preslar at the Abstract, and at cols. 2-3, bridging paragraphs (emphasis added):

Abstract

First and second electrical components on an integrated circuit chip are electrically connected respectively to a wire bonding pad and to a probe contacting area of a size significantly less than the bonding pad. The pad and contacting area are electrically isolated whereby *both components can be separately electrically tested by test probes contacting each of the pad and the contact area. After the components have been tested, the bonding pad and the probe contact area are electrically connected together for electrically connecting the first and second components.* ...

.....

Summary of the Invention

The invention resides, in part, in ...Thus, in contrast to the prior art structure described above, on chips embodying the invention *the separate testing of two components is made possible by* providing and connecting one bonding pad to one of the components, and providing and connecting a separate and smaller probe contacting "test" area electrically insulated from the bonding pad to the other of the two components. *Accordingly, both components can be separately and/or independently tested.* After the components have been tested, the test area and the bonding pad are electrically connected together directly on the chip, and only a single terminal wire is used for providing a common external connection for both components.

By comparison, Applicant's bond structure is in the form of two separate bond pads — one bond pad adapted to receive and supply a test mode signal and an operational mode signal to function circuitry in the die, and the other bond pad adapted to receive and supply only an operational mode signal.

Preslar does not teach or suggest a bond pad structure as recited in Claims 28, 30-34, 74, and 76. Accordingly, withdrawal of the rejection of the claims based on Preslar is respectfully requested.

Rejection under 35 U.S.C. §103(a) (Preslar with Ellis-Monaghan)

The Examiner rejected Claims 1, 2, 4-23, 26, 27, 50-55, 57-65, 69, 70-73, 75, 77, and 78 as obvious over Preslar in view of Ellis-Monaghan (USP 6,495,917). This rejection is respectfully traversed.

The Examiner cites Ellis-Monaghan as disclosing a pad (361) having a plurality of lower metal layers (LM1-LM3) under an upper metal layer (361), citing to FIG. 36, and col. 7, line 51 to col. 8, line 23.

Ellis-Monaghan's disclosure fails to cure the base deficiency of the Preslar in teaching Applicant's devices as claimed. As stated above, the Preslar teaches a bond pad structure in which *both* bond pads are structured for testing of components in a test mode, and Ellis-Monaghan's disclosure does not correct that deficiency.

The combination of Ellis-Monaghan with Preslar's structure would not provide Applicant's bond pad structure as claimed. Accordingly, withdrawal of this rejection of the claims is respectfully requested.

Extension of Term. The proceedings herein are for a patent application and the provisions of 37 CFR § 1.136 apply. Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition for extension of time.

Based on the above remarks, the Examiner is respectfully requested to reconsider and withdraw the rejections of the claims.

Respectfully submitted,

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